

**In the Claims:**

Please amend claims 1, 7-8 and 10-11 as indicated below. This listing of claims replaces all prior versions.

1. (Currently amended) An electronic device comprising:

a semiconductor device provided with a plurality of bond pads, of which bond pads a first portion is defined for ground connection and a second portion is defined for voltage supply and a third portion is defined for signal transmission, and

a carrier substrate comprising a layer of dielectric material and having a first side and an opposed second side, the first side and the opposed second side are each provided with an electrically conductive layer, on which first side bond pads are present corresponding to the bond pads of the semiconductor device, and on which second side contact pads for external coupling are provided, the contact pads and the bond pads being electrically interconnected according to a desired pattern, the contact pads being subdivided into a first, a second and a third portion corresponding to the portions of bond pads of the semiconductor device, the first and second portions of the bond pads being present laterally in an inner area and the third portion being present in an outer area laterally around the inner area, wherein

the semiconductor device is coupled to the carrier substrate in a flip-chip orientation, and

the bond pads and the contact pads for voltage supply and ground connection are located correspondingly, so as to provide a direct path from the contact pads at the second side of the substrate to the corresponding bond pads of the semiconductor device, and

the pads of the first and second portions are arranged such that at least one direct path dedicated to voltage supply connection acts as a coaxial center conductor.

2. (Original) An electronic device as claimed in claim 1, wherein the bond pads of the first and second portion form a joint array, having an edge and an inner area, and the bond pads of the second portion at the edge are provided with ESD protection structures, the bond pads of the second portion in the inner area being free of such ESD protection structures.

3. (Original) An electronic device as claimed in claim 2, wherein the pads for ground and supply connection are arranged according to a chessboard pattern.

4. (Original) An electronic device as claimed in claim 1, wherein a layer of dielectric material extends from the first to the second side in the substrate.

5. (Previously presented) An electronic device as claimed in claim 1, characterized in that the bond pads of the third portion and the corresponding contact pads for external coupling are interconnected through:

interconnects defined in the conductive layer on the first side of the carrier substrate, and

vertical interconnects through the carrier substrate which, in the case of perpendicular projection on the conductive layer on the second side, have a substantial overlap with the contact pads for signal transmission.

6. (Previously presented) An electronic device as claimed in claim 5, characterized in that a ground plane is defined in the conductive layer on the second side of the carrier substrate,

the mutual distance between the interconnects and the dielectric thickness of the carrier substrate are chosen such that the interconnects have transmission line characteristics.

7. (Currently amended) An electronic device ~~as claimed in claim 1, further~~ comprising:  
a semiconductor device provided with a plurality of bond pads, a first portion of the bond pads defined for ground connection, a second portion of the bond pads defined for voltage supply and a third portion of the bond pads defined for signal transmission;  
and

a carrier substrate including a layer of dielectric material, the carrier substrate having a first side and an opposed second side and a mechanical stiffener layer on the first side of the carrier substrate, the first side and the second side each provided with an

electrically conductive layer, on the first side of the carrier substrate bond pads are present corresponding to the bond pads of the semiconductor device, and on the second side of the carrier substrate contact pads for external coupling are provided, the contact pads and the bond pads being electrically interconnected according to a desired pattern, the contact pads being subdivided into a first, a second and a third portion corresponding to the portions of bond pads of the semiconductor device, the first and second portions of the bond pads being present laterally in an inner area and the third portion being present in an outer area laterally around the inner area, wherein

the semiconductor device is coupled to the carrier substrate in a flip-chip orientation, and

the bond pads and the contact pads for voltage supply and ground connection are located correspondingly, so as to provide a direct path from the contact pads at the second side of the substrate to the corresponding bond pads of the semiconductor device, and

the pads of the first and second portions are arranged such that at least one direct path dedicated to voltage supply connection acts as a coaxial center conductor.

8. (Currently amended) An electronic device as ~~claimed in claim 1~~, further comprising:

a semiconductor device provided with a plurality of bond pads, a first portion of the bond pads defined for ground connection, a second portion of the bond pads defined for voltage supply and a third portion of the bond pads defined for signal transmission; and

a carrier substrate including a layer of dielectric material, the carrier substrate having a first side and an opposed second side and a spacer layer on the first side of the carrier substrate, which the spacer layer is covered by a heat dissipation layer, which the heat dissipation layer is in thermal contact with the semiconductor device at a face thereof opposite to the face comprising including the bond pads, the first side and the opposed second side each provided with an electrically conductive layer, on the first side of the carrier substrate bond pads are present corresponding to the bond pads of the semiconductor device, and on the second side of the carrier substrate contact pads for external coupling are provided, the contact pads and the bond pads being electrically interconnected according to a desired pattern, the contact pads being subdivided into a

first, a second and a third portion corresponding to the portions of bond pads of the semiconductor device, the first and second portions of the bond pads being present laterally in an inner area and the third portion being present in an outer area laterally around the inner area, wherein

the semiconductor device is coupled to the carrier substrate in a flip-chip orientation, and

the bond pads and the contact pads for voltage supply and ground connection are located correspondingly, so as to provide a direct path from the contact pads at the second side of the substrate to the corresponding bond pads of the semiconductor device, and

the pads of the first and second portions are arranged such that at least one direct path dedicated to voltage supply connection acts as a coaxial center conductor.

9. (Original) An electronic device as claimed in claim 8, wherein the heat dissipation layer is connected thermally to a heat sink at the carrier substrate.

10. (Currently amended) An electronic device ~~as claimed in claim 1~~, further comprising:  
a semiconductor device provided with a plurality of bond pads, a first portion of the bond pads defined for ground connection, a second portion of the bond pads defined for voltage supply and a third portion of the bond pads defined for signal transmission;

a carrier substrate including a layer of dielectric material and having a first side and an opposed second side, the first side and the second side each provided with an electrically conductive layer, on the first side of the carrier substrate bond pads are present corresponding to the bond pads of the semiconductor device, and on the second side of the carrier substrate contact pads for external coupling are provided, the contact pads and the bond pads being electrically interconnected according to a desired pattern, the contact pads being subdivided into a first, a second and a third portion corresponding to the portions of bond pads of the semiconductor device, the first and second portions of the bond pads being present laterally in an inner area and the third portion being present in an outer area laterally around the inner area, wherein

the semiconductor device is coupled to the carrier substrate in a flip-chip orientation, and

the bond pads and the contact pads for voltage supply and ground connection are located correspondingly, so as to provide a direct path from the contact pads at the second side of the substrate to the corresponding bond pads of the semiconductor device, and

the pads of the first and second portions are arranged such that at least one direct path dedicated to voltage supply connection acts as a coaxial center conductor; and

a second semiconductor device that is provided with a direct path for ground and voltage supply connection from its bond pads to the second side of the carrier substrate, on which second side contact pads for ground and voltage supply connection are present.

11. (Currently amended) A carrier substrate comprising a layer of dielectric material and having a first side and an opposed second side, the first side and the opposed second side are each provided with an electrically conductive layer, on ~~which~~ the first side bond pads for coupling to bond pads of a semiconductor device are present, and on ~~which~~ the second side contact pads for external coupling are provided, the contact pads and the bond pads being electrically interconnected according to a desired pattern, the ~~contacts~~ bond pads being subdivided into a first portion for voltage supply connection, a second portion for ground connection and a third portion for signal transmission, the first and second portions of the bond pads being present laterally in an inner area and the third portion being present in an outer area laterally around the inner area, wherein

the first and second portions of the bond pads jointly make up an array, which array extends to the contact pads on the second side of the carrier substrate, so as to form a direct path, and

the pads for ground connection and for supply connection are arranged in the array such that each of the pads for supply connection has pads for ground connections as its closest neighbour pads.